

LAWRENCE LIVERMORE NATIONAL LABORATORY



Students touring NIF

Retiring? You can help to enhance science and math education in our local communities.

The Lawrence Livermore National Laboratory (LLNL) prides itself on its numerous educational programs and partnerships to help train the next generation of scientists and engineers. As a retiring Laboratory employee you may be interested in leveraging your special skills and knowledge to benefit our local K-12 schools. This flyer describes various opportunities for you to contribute. Contact names and web links are provided for additional information. For general questions or suggestions, contact Ann Willoughby at (925) 423-4234. Working with young people to encourage science, engineering and math learning is fun and rewarding. Please consider participating in one or more of these valuable programs that benefit our local communities.



Fun with Science demo



Science fair judging

Super Science Field Trips

The Laboratory offers a field trip program for local fifth grade classes on Monday through Friday mornings. A single class comes to the Lab's Discovery Center and participates in a two-hour interactive Fun with Science (FWS) presentation. FWS demonstrates concepts in chemistry, physics and environmental science. Volunteers are needed as FWS presenters. Contact Ann Willoughby, (925) 423-4234. (http://www.llnl.gov/pao/com/school_tours.html)

Tri-Valley Science & Engineering Fair (TVSEF)

The Lab's annual Tri-Valley Science and Engineering Fair, held in March in Livermore, is a project competition for 7th-12th graders in the Livermore, Pleasanton, Dublin, San Ramon, and Sunol school districts. The fair provides a forum for students to present their scientific work, interact with scientists and engineers and receive feedback on their



EYH Conference



TOPScience in Livermore



MATHCOUNTS coach



Teacher academies

efforts. Students are awarded scholarships, cash prizes and other non-monetary recognition for outstanding work. Approximately 250-300 students participate each year. More than 120 volunteer judges are needed each year to spend a day judging the students' projects. Junior sweepstakes winners go on to compete in the California State Science Fair. Senior sweepstakes winners are invited to compete in the prestigious Intel International Science and Engineering Fair held annually in May. Contact Nadine Horner, (925) 423-9051. (<http://tvsef.llnl.gov/>)

Expanding Your Horizons (EYH) Conferences®

LLNL co-sponsors three annual EYH Conferences for middle and high school girls. EYH Conferences are part of a national program that is intended to spark girls' interest in mathematics and science through positive, hands-on workshops and career discussions with professionals. Approximately 1,500 girls attend the three conferences each year. Conferences are held in San Ramon in February, Oakland in March and Stockton in October. Men and women may volunteer as workshop leaders or career fair participants, or may help with facilities and other day-of support. Contact Sarah Roberts, (925) 423-4112. (<http://www.llnl.gov/eyh/>)

MATHCOUNTS® for Livermore Middle Schools

Laboratory employees and retirees are having a direct impact on student math achievement in Livermore middle schools as volunteer coaches in the school district's MATHCOUNTS education program. MATHCOUNTS is a national enrichment, coaching and competition program that promotes middle school mathematics achievement through grassroots involvement. Volunteer coaches meet with students at their school for one hour each week to help students solve math word problems. Students are highly motivated and want help. Contact Richard Farnsworth, (925) 422-5059. (<http://education.llnl.gov/mathcounts/>)

TOPScience for Education Partners

Teaching Opportunities for Partners in Science (TOPScience) is a school district program that utilizes

retired scientists as education partners in San Joaquin County and Livermore elementary schools. TOPScience partners act as science and math content resources and assist in classroom presentations, family science nights, field trips, science clubs and career days. Contact Connie Oliver, San Joaquin Office of Education, (209) 468-4880 (<http://www.edserv.sjcoe.net/TOPS/index.html>) or Kelly Bowers, Livermore School District, (925) 606-3202 (<http://mail.livermore.k12.ca.us/~tops/>).

Teacher Credential and Professional Development Programs

Retirees with advanced degrees in math or science and who want to teach in middle or high schools may earn their California Single Subject Teaching Credential through California State University East Bay (CSUEB). The Single Subject Program begins in June and takes four quarters to complete. CSUEB programs are offered at locations in Concord, Hayward and Richmond. Contact Jim Zarrillo, (510) 885-7439. (<http://edschool.csueastbay.edu/departments/ted>)

The University of California Davis Edward Teller Education Center (ETEC), in collaboration with the Lab's Science and Technology Education Program, offers standards-based Teacher Research Academies (TRA) for K-14 science teachers. The academies allow teachers to progress from novice to mastery in a variety of scientific disciplines, including bioinformatics, biotechnology, biophotonics, fusion-astronomy and energy technologies and the environment. Each of the content areas is derived from the cutting-edge science conducted at LLNL. Teachers participating in the TRA will have an opportunity to see science in the Laboratory and meet the scientists performing the work. This experience provides teachers with a context to discuss with students how this science is used to solve real, large-scale problems. Academies are offered during the summer at ETEC, located at LLNL, and at various satellite locations in the Central Valley. Teachers may earn transferable CSUEB credits toward a master of science in education. Contact Carey Kopay, (925) 422-1314. (<http://etec.ucdavis.edu/>)